

23. (New) A method for producing a transformed host cell comprising transforming the cell to comprise the isolated DNA molecule of claim 21.

24. (New) A method for producing a transformed host cell comprising transforming the cell to comprise the plasmid of claim 22.

25. (New) A transgenic plant transformed to contain the isolated DNA molecule of claim 21 and comprising an altered amount of amino acid transporter activity relative to a non-transformed plant.

26. (New) A transgenic plant comprising cells comprising the isolated DNA molecule of claim 21.

27. (New) A bacterium comprising the isolated DNA molecule of claim 21.

28. (New) A bacterium comprising the plasmid of claim 22.

29. (New) A method for isolating a DNA molecule which encodes a plant amino acid transporter, comprising:

probing a library of plant nucleic acid molecules with the isolated molecule of claim 21, and

isolating plant nucleic acid molecules which hybridize to the isolated DNA molecule.

30. (New) The method for isolating a DNA molecule which encodes a plant amino acid transporter of claim 29 further comprising an *Arabidopsis* amino acid transporter.

31. (New) The plasmid of claim 22 further comprising a promoter operably linked to the isolated DNA molecule.

32. (New) The plasmid of claim 22 further comprising a transcriptional termination sequence operably linked to the isolated DNA molecule.

A2
Cont'd

098474-051401

33. (New) The plasmid of claim 31 further comprising a transcriptional termination sequence operably linked to the isolated DNA molecule.

34. (New) The plasmid of claim 22 wherein the isolated DNA molecule is in the sense orientation.

35. (New) The plasmid of claim 22 wherein the isolated DNA molecule is in the anti-sense orientation.

36. (New) A method for producing a host cell capable of an increased amount of an amino acid transporter relative to a non-transformed cell comprising transforming the cell with the plasmid of claim 34.

37. (New) A method for producing a host cell capable of a decreased amount of an amino acid transporter relative to a non-transformed cell comprising transforming the cell with the plasmid of claim 35.

38. (New) A yeast strain comprising the isolated DNA molecule of claim 21.

39. (New) A method for altering the transport of metabolites in a host cell comprising transforming the cell so as to comprise the isolated DNA molecule of claim 21.

40. (New) A cell obtainable from the method of claim 23.

41. (New) A cell obtainable from the method of claim 24.

42. (New) A cell obtainable from the method of claim 36.

43. (New) A cell obtainable from the method of claim 37.

44. (New) A cell obtainable from the method of claim 39.

45. (New) A transgenic plant comprising an altered amount of amino acid transporter activity by comprising a number of copies of the isolated DNA molecule of claim 21.

46. (New) A method for producing a plant comprising transforming plant cells to comprise the isolated DNA molecule of claim 21, and regenerating a transformed plant from the plant cells.

47. (New) The method of claim 46 wherein the isolated DNA molecule is in the anti-sense orientation and the transformed plant has a decreased amount of amino acid transporter relative to a non-transformed plant.

48. (New) The method of claim 46 wherein the isolated DNA molecule is in the sense orientation and the transformed plant has an increased amount of amino acid transporter relative to a non-transformed plant.

49. (New) A plant obtainable from the method of claim 46.

50. (New) A plant obtainable from the method of claim 47.

51. (New) A plant obtainable from the method of claim 48.

52. (New) An isolated DNA molecule comprising a nucleotide sequence encoding a plant amino acid transporter for membrane transport which complements a yeast peptide transport mutation.

53. (New) The isolated DNA molecule of claim 52 wherein the yeast has a proline transport mutation or a histidine synthesis and transport mutation.

54. (New) The isolated DNA molecule of claim 53 wherein the yeast is strain 22574d or JT16.

55. (New) A first isolated DNA molecule comprising a nucleotide sequence encoding a plant amino acid transporter for membrane transport which hybridizes to a second isolated DNA molecule consisting of the coding region of SEQ ID NO:1.

56. (New) A first isolated DNA molecule comprising a nucleotide sequence

encoding a plant amino acid transporter for membrane transport which hybridizes to a second isolated DNA molecule consisting of the coding region of SEQ ID NO:3.

A2
added

57. (New) A first isolated DNA molecule comprising a nucleotide sequence encoding a plant amino acid transporter for membrane transport which hybridizes to a second isolated DNA molecule encoding an amino acid sequence as shown in SEQ ID NO:2.

58. (New) A first isolated DNA molecule comprising a nucleotide sequence encoding a plant amino acid transporter for membrane transport which hybridizes to a second isolated DNA molecule encoding an amino acid sequence as shown in SEQ ID NO:4.

REMARKS

0865474-051401
For 50424580

This Preliminary Amendment adds a lineage to the present application. This application is a divisional of application Serial No. 08/964,939 filed November 5, 1997, now allowed, which is a divisional of application serial no. 08/362,512 filed January 05, 1995, now U.S. Patent No. 5,719,043, granted February 17, 1998 as the National Phase of PCT/EP93/01736, filed July 1, 1993, designating the U.S., published as WO 94/01559, and claiming priority under 35 U.S.C. § 119 to German application P 4 22 2315.6 filed July 5, 1992.

Claims 1 to 20 are pending in this application.

Claims 1 to 20 are cancelled by this amendment and are replaced with new claims 21 to 58. New claims 21 to 58 are added to more particularly point out and distinctly claim the subject matter which the Applicant regards as his invention. These claims are directed to subject matter which was either withdrawn from consideration or cancelled in the parent application. The right to file divisional applications to the cancelled subject matter was expressly reserved in the parent application. No new matter is added by this amendment and support for these new claims can be found in the specification and the claims as originally filed.